Summary of Changes - SOM01.0 (10/8/04) to SOM01.1 (5/26/05)

This document is an overview of the major changes (additions and deletions) made to the Contract Laboratory Program Analytical Methods for Organics Analysis, SOM01.0. This document is intended to provide a high level summary of changes made to Exhibits A, C, E, F, G, and Appendix A, as well as a detailed summary of changes made to Exhibits B, B Forms, D Trace VOA, D Low/Medium VOA, D SVOA, D PEST, D ARO, and H. It is recommended that the document be reviewed in its entirety.

EXHIBIT/SECTION(S)	REVISIONS
GENERAL	
General	Unless otherwise identified, the following changes were made throughout the document. • Section and equation number changes were cascaded throughout the document. Reference to sections and equations have also been updated. • The abbreviation for Percent Breakdown (%B) was changed to %Breakdown. • Analytical Operations/Data Quality Center (AOC) was changed to Analytical Services Branch (ASB). • The abbreviation for kilograms (Kg) was changed to the lowercase "kg". • "SOM01.0" was changed to "SOM01.1". • "m+p-xylene" and "m- and p- xylene" were changed to "m,p-xylene".
EXHIBIT A	
Exhibit A: Section 4.2.2.3.1	The phrase "within a Case" was removed from the first bullet.
Exhibit A: 4.2.2.9	The section was modified to read as follows: "For each analysis of a sample, the Contractor shall conduct mass spectral library searches to determine tentative compound identifications as follows: for each volatile sample, the Contractor shall conduct a search to determine the possible identity of up to 30 organic compounds of greatest concentration which are not Deuterated Monitoring Compounds (DMCs), internal standard compounds, or alkanes, and are not target compounds listed in Exhibit C under volatiles or semivolatiles. For each semivolatile sample, the Contractor shall conduct a search to determine the possible identification of up to 30 organic compounds of greatest concentration which are not DMCs, internal standard compounds, or alkanes, and are not target compounds listed in Exhibit C under volatiles or semivolatiles. In performing searches, the NIST/EPA/NIH (2002 release or later) and/or Wiley (1991 release or later), or equivalent, mass spectral library shall be used. NOTE: Substances with responses less than 10% of the nearest internal standard are not required to be searched in this fashion."

EXHIBIT/SECTION(S)	REVISIONS
EXHIBIT B	
Exhibit B: Section 1.1	• In the Laboratories heading, in the explanation for Footnote 4, the word "and" before "Form X for Pesticides" was removed. • In the Laboratories heading, in the explanation for Footnote 4, a comma was inserted in the first sentence after the phrase "Form X for Pesticides".
Exhibit B: Section 2.4.1	The following items were added to the SDG Cover Sheet: • "Modification number" • "List of fractions analyzed".
Exhibit B: Section 2.5.3.1.1	The Form "VOA-SIM" and the comma immediately following it, were removed from this section.
Exhibit B: Section 2.5.3.2.2	In the 3rd sentence, the phrase "(straight-chain or branched) or C_nH_{2n} (cyclic)" was added. Also, the following sentence was removed: "If no compounds are found, indicate this on the form by entering '0' in the field for 'Number Found'."
Exhibit B: Section 2.5.3.3.1	Following the 3rd bullet, the following note was added: "NOTE: For low-level soil samples, the concentration of the low standard is 2.5 µg/L. Since 10 mL purge volumes are required for low-level soil standards, the reported label shall be RRF2.5."
Exhibit B: Section 2.5.4.2.2	The section was modified to read as follows: "Semivolatile Tentatively Identified Compounds (Form I SV-TIC). Form I SV-TIC is the tabulated list of the highest probable match for up to 30 organic compounds that are not DMCs, internal standard compounds, or alkanes, and are not target compounds listed in Exhibit C - Volatiles and Semivolatiles. An alkane is defined as any hydrocarbon with the generic formula C_nH_{2n+2} that contains only C-H and C-C single bonds. The tabulated list includes the CAS Number (if applicable), tentative identification, and estimated concentration. This form shall be included even if no compounds are found."
Exhibit B: Section 2.5.4.2.4	The 2nd bullet, "Volume injected (µL)", was added.
Exhibit B: Section 2.5.4.2.4.1	The word "standards" was deleted from the 1st line following "Internal", and replaced with "standard compounds".
Exhibit B: Section 2.5.4.3.1	Two occurrences of the measurement "µg/L" were removed from the 4th bullet, and replaced with "ng/µL".
Exhibit B: Section 2.5.5.3.14	In the 3rd bullet, the following phrase was removed: "and Individual Standard Mixture D, at five concentrations, for each initial calibration."
Exhibit B: Section 2.8	The phrase "if requested by the Region" was added at the end of the section.

EXHIBIT/SECTION(S)	REVISIONS
Exhibit B: Section 2.8.2	Table 2 was modified to as follows: • An additional major row was added to clarify the separation of the Trace VOA and Low/Medium VOA structures. • All occurrences of "continuing calibration verification" were replaced with the acronym "CCV". • Under the "ARO" heading in the "Raw QC Data" row, the word "Method" was removed before "Blank Data".
Exhibit B: Section 3.2.3	The following section was added: "If an entry does not fill the entire blank space provided on the form, null characters shall be used to remove the remaining underscores that comprise the blank line. However, the Contractor shall **not** remove the underscores or vertical bars that delineate "boxes" on the forms. The only exception would be those underscores at the bottom of a "box" that are intended as a data entry line. (For instance, on Form 2A, line 30, if data is entered on line 30, it will replace the underscores.)"
Exhibit B: Section 3.3.8	• In the 3rd bullet, the word "trace" was added inside the parentheses before "volatile water only" for the TRACE concentration level. • In the 3rd bullet, the phrase "volatile water and volatile and semivolatile soil" was added for the "LOW" concentration level. • The following 4th bullet was added: "The 'Purge Volume' field is used for volatile samples and associated calibration standards to describe the total volume of sample or calibration standard that is analyzed. For water and medium-level soil samples and their associated calibration standards, the value to be entered is '5.0 mL'. For low-level soil samples and their associated calibration standards, the value to be entered is '10.0 mL'." • In the 5th bullet, the sentence "The Contractor can enter up to 12 alpha-numeric characters in the 'Laboratory Sample ID' field" was changed to: "The Contractor must enter the Laboratory Sample Identifier using alpha-numeric characters in the 'Lab Sample ID' Field." • In the 2nd sentence of the 6th bullet, the sentence "The Contractor can enter up to 12 alpha-numeric characters in the 'Lab Sample ID' field" was changed to: "The Contractor must enter the Laboratory Sample Identifier using alpha-numeric characters in the 'Lab Sample ID' Field."
Exhibit B: Section 3.4.2.1	The first sentence has been modified to include "VOA-TIC".

EXHIBIT/SECTION(S)	REVISIONS
Exhibit B: Section 3.4.2.2	The phrases "SV-SIM" and "SV-TIC" were added at the end of the 1st sentence.
Exhibit B: Section 3.4.2.5	The phrase "and for water samples analyzed for semivolatiles, Pesticides, and Aroclors" was added at the end of the section.
Exhibit B: Section 3.4.2.18	• The paragraph and note for the "J" qualifier were modified as follows: "J: This flag indicates an estimated value. This flag is used when: (1) estimating a concentration for Tentatively Identified Compounds (TICs) where a 1:1 response is assumed; (2) the mass spectral and Retention Time (RT) data indicate the presence of a compound that meets the volatile and semivolatile GC/MS identification criteria, and the result is less than the adjusted CRQL but greater than zero; and (3) the RT data indicate the presence of a compound that meets the pesticide and/or Aroclor identification criteria, and the result is less than the adjusted CRQL but greater than zero. For example, if the sample's adjusted CRQL is 5.0 µg/L, but a concentration of 3.0 µg/L is calculated, report it as 3.0J. NOTE: The "J" flag is not used, and the compound is not reported as being identified for pesticide or Aroclor results less than the adjusted CRQL, if the pesticide residue analysis expert determines that the peaks used for compound identification resulted from instrument noise or other interferences (e.g., column bleed, solvent contamination)." • In the paragraph for the "E" qualifier, the word "response" was changed to the word "result" in the 4th sentence. • In the paragraph for the "D" qualifier, under Note 1, the word "adjusted" was added before "CRQL".
Exhibit B: Table 3, Volatile Deuterated Monitoring Compounds	Entries for "VDMC9" (Toluene-d_8) and "VDMC10" (trans-1,3-Dichloropropene-d_4) were added to Table 3.
Exhibit B: Table 4, Semivolatile Deuterated Monitoring Compounds	In SDMC2, the reference to bis-(2-Chloroethyl) ether-d_8 has been modified as follows: "Bis (2-chloroethyl) ether-d_8".
Exhibit B: Table 4, Semivolatile Deuterated Monitoring Compounds	In SDMC9, Dimethylphthalate-d_6, the CAS Number was changed from "93951-89-4" to "85448-30-2".
Exhibit B: Section 3.6.1	The following sentence was added at the end of the section: "For SIM analysis by the volatiles method, recoveries for the SIM DMC compounds need to be reported on Form II VOA-SIM1, VOA-SIM2."

EXHIBIT/SECTION(S)	REVISIONS
Exhibit B: Sections 3.8.1.2.2	This section was modified to read as follows: "For volatile water samples, specify level as TRACE or LOW on Form III VOA-1. For volatile and semivolatile soil samples, specify level as LOW or MED on Form III VOA-2, and SV-2. SDGs containing soil samples at both levels require an MS/MSD at each level; therefore, for soils, prepare one form for each level. Complete the remainder of the form using the following instructions."
Exhibit B: Section 3.9.2.10	The following text was added: "For Aroclor blanks, enter "Y" in the "Acid Cleanup" field on Form IV ARO. NOTE: Acid cleanup is required for all method blanks analyzed for Aroclors; therefore, all Form IV ARO will contain a "Y" in this field."
Exhibit B: Sections 3.12.2.6	The section was modified to read as follows: "Calculate the RT window for each analyte using the specifications in Exhibit D, and enter the lower limit of the window in the "RT WINDOW" column under "FROM" and the upper limit of the window under "TO" on Form VI PEST-1. If Individual Standard Mixture C is used, the second set of entries for the surrogates should be left blank."
Exhibit B: Section 3.12.2.7	The section was modified to read as follows: "For the analyses of the Individual Standard Mixtures: A, B, or C, the Contractor shall also complete the CF data on Form VI PEST-2. Prepare one form for each instrument and GC column used. Enter the CF for each compound in each of the standards. Calculate and enter a %RSD. If Individual Standard Mixture C is used, the second set of entries for the surrogates should be left blank."
Exhibit B: Section 3.12.2.14	The phrase "and surrogates" was added after the word "peak" in the 1st sentence.
Exhibit B: Sections 3.12.2.15 and 3.12.2.16	The phrase "(including surrogates)" was added after the word "peak" in the 1st sentence.
Exhibit B: Sections 3.12.2.16 and 3.12.2.17	The last sentence of these sections was modified. The last sentence now states: "If Aroclors 1016 and 1260 are run as a combined mixture, the second set of surrogate entries should be left blank."
Exhibit B: Section 3.12.2.17	An "and" was added following the 1st comma in the 1st sentence to fix the syntax of the 1st sentence. The sentence now reads: "For the five analyses of Aroclor 1016 and 1260, and any other Aroclor if detected, the Contractor shall also complete the CF data for Form VI-ARO-2."
Exhibit B: Section 3.12.4.1	The following sentence was removed from the end of the section: "Spell out the names of the surrogates as they appear on Form VII PEST-2."

EXHIBIT/SECTION(S)	REVISIONS
Exhibit B: Section 3.13.2.3	The phrase "and DMC" was added after "target compound".
Exhibit B: Section 3.14.2.9	The abbreviation "%Breakdown" replaces the abbreviation "%B" in the 1st sentence.
Exhibit B: Section 3.15.2.4	The section was modified to read as follows: "For each internal standard listed in Tables 7 and 8, calculate the upper and lower limits of the area of the particular standard for Low/Medium Volatiles and Trace Volatiles accordingly. Report these values in the "UPPER LIMIT" and "LOWER LIMIT" rows, respectively. Calculate the upper limit of the RT as the retention of the internal standard, and the lower limit of the RT as the RT in the standard minus 0.50 minutes (30 seconds) for Low/Medium or 0.33 minutes (20 seconds) for Trace Volatiles, respectively."
Exhibit B: Section 3.18.2.10	The following sentence was added after the 4th sentence : "The Aroclor peaks used for quantitation must be reported in its proper position (e.g., If peaks 1, 3, and 5 were used, then report the values of these peaks and in the 1, 3, and 5 position on Form X)."
Exhibit B: Section 3.18.2.3	The phrase "on both columns" was added following the phrase "positively identified".
EXHIBIT B FORMS	
General: All Forms	For all occurrences of the "Mod. Ref. No.:" field, the line was lengthened.
Exhibit B: Forms 1A, 1B, 1J, 6A, 6B, 6C, 7A, 7B, 7C	A "Purge Volume" field was added.
Exhibit B: Form 1A, 6A, 7A	Capitalization changes were made to the following entries: • "Vinyl Chloride" is now "Vinyl chloride" • "Carbon Disulfide" is now "Carbon disulfide" • "Methyl Acetate" is now "Methyl acetate" • "Methylene Chloride" is now "Methylene chloride" • "Methyl tert-Butyl Ether" is now "Methyl tert-butyl ether" • "Carbon Tetrachloride" is now "Carbon tetrachloride"

EXHIBIT/SECTION(S)	REVISIONS
Exhibit B: Form 1D, 7E	Capitalization changes were made to the following entries: • "bis(2-Chloroethyl)ether" is now "Bis(2-chloroethyl)ether". • "2,2'-oxybis(1-Chloropropane)" is now "2,2'-Oxybis(1-chloropropane)". • "bis(2-Chloroethoxy)methane" is now "Bis(2-chloroethoxy)methane".
Exhibit B: Form 1E	A capitalization change was made to the following entry: "bis(2-Ethylhexyl)phthalate" is now "Bis(2-ethylhexyl)phthalate".
Exhibit B: Forms 2A, 2C, 2E	A capitalization change was made to the following entry: The "c" was changed to lowercase for VDMC1 (VCL), "Vinyl chloride-d_3".
Exhibit B: Form 2A, 2B, 3A	The "MED" option was removed for the "Level" field, so that the choices are now "TRACE" or "LOW".
Exhibit B: Forms 2B, 2D, 2F	A capitalization change was made to the following entry: The "t" was changed to lowercase for VDMC10 (TDP), "trans-1,3-Dichloropropene-d_4".
Exhibit B: Forms 2G and 2J	A capitalization change was made to the following entry: The "B" in "Bis" was changed to uppercase, and the "c" was changed to lowercase for SDMC2 (BCE), "Bis (2-chloroethyl) ether-d_8".
Exhibit B: Forms 3N and 3P	The QC Limits for AR1016 were changed from "50-120" to "50-150".
Exhibit B: Form 4D	• The column for "Date Analyzed (2)" was removed. • The name for the 3rd column has also been changed to "Date Analyzed", with the number "1" removed.
Exhibit B: Form 4D	A new column was added, for "Lab File ID". This was inserted as the 3rd column from the left, to the right of the "Data Analyzed" column.
Exhibit B: Form 4F	An "Acid Cleanup: (Y/N)" field was added.
Exhibit B: Form 5A	• Spacing was changed for m/e 174. It now reads as follows: "5.0 - 9.0% of mass 174" • Spacing was changed for the definitions for Values 1 and 2. The values now appear as follows: "1 - Value is %mass 174" "2 - Value is %mass 176".

EXHIBIT/SECTION(S)	REVISIONS
Exhibit B: Form 5B:	Spacing was changed for the definition for Values 1 and 2. The values now appear as follows: "1 - Value is %mass 69" "2 - Value is %mass 442".
Exhibit B: Form 6B	• The "RRF___=_____" field was removed from the form header section. • "m + p-Xylene" has been changed to "m,p-Xylene" • The order of "m,p-Xylene" and "o-Xylene" has been reversed.
Exhibit B: Forms 6E and 7E	The hyphen was removed from between the "Bis" and the "(2-chloroethyl)" in the 3rd entry, Bis (2-chloroethyl) ether, and the 15th entry, Bis (2-chloroethoxy) methane.
Exhibit B: Forms 6J, 6L, 6M	At the top of the table, the field "Lab File ID" and five fields for CS1 through CS5 were removed.
Exhibit B: Form 6J	Text has been added under the table as follows: "(A) Surrogate RTs are measured from Standard Mixture A if two mixtures are used or from Standard Mixture C if one mixture is used. (B) Surrogate RTs are measured from Standard Mixture B if two mixtures are used. Leave entries blank if Standard Mixture C is used. * RT windows are ± 0.05 minutes for all compounds that elute before Heptachlor epoxide; ± 0.07 minutes for all other compounds (except ± 0.10 minutes for DCB). TCX = Tetrachloro-m-xylene DCB = Decachlorobiphenyl"
Exhibit B: Form 6K	Text has been added under the table as follows: "(A) Surrogate CFs and %RSD are measured from Standard Mixture A if two mixtures are used or from Standard Mixture C if one mixture is used. (B) Surrogate CFs and %RSD are measured from Standard Mixture B if two mixtures are used. Leave entries blank if Standard Mixture C is used. TCX = Tetrachloro-m-xylene DCB = Decachlorobiphenyl"
Exhibit B: Form 6N	An asterisk was removed from next to the column title "RT of Standards".

EXHIBIT/SECTION(S)	REVISIONS
Exhibit B: Forms 6N, 6P, 7N	• New rows were created for "TCX" and "DCB" such that the rows now appear in the following order: AR1016, TCX, DCB, AR1260, TCX, DCB, AR____, TCX, DCB. • The following was added to the bottom of the form: "TCX = Tetrachloro-m-xylene DCB = Decachlorobiphenyl".
Exhibit B: Form 6P	• All instances of "tetrachloro-m-xylene" were replaced by "TCX". • All instances of "decachlorobiphenyl" were replaced by "DCB".
Exhibit B: Forms 7A, 7B, 7C, 7D, 8A	Symbols were added in the "EPA Sample No. (VSTD#####)" field in the top left column at the top of the page to ensure that there are five numeral place holders.
Exhibit B: Forms 7A, 7B, 7C, 7D, 7E, 7F, 7G, 7H, 7J, 7K, 7L, 7M, 7N, 8A, 8B, 8C, 8E, 8G, 8H	The line in the "Init. Calib. Date(s)" field was expanded to allow room for the MM/DD/YYYY format.
Exhibit B: Form 7B	• "m + p-Xylene" has been changed to "m,p-Xylene" • The order of "m,p-Xylene" and "o-Xylene" has been reversed.
Exhibit B: Form 7A, 7B, 7C	The "EPA Sample No.(VSTD#####):" field has been modified to reflect "EPA Sample No.(VSTD####):"
Exhibit B: Form 7D	The "EPA Sample No.(VSTD_##):" field has been modified to reflect "EPA Sample No.(VSTD#####):"
Exhibit B: Form 7E	A capitalization change was made to the following entry: The "c" in "chloropropane" was made lowercase in the 6th entry, "2,2'-Oxybis (1-chloropropane)".
Exhibit B: Form 7G	A capitalization change was made to the following entry: The "c" in "chloroethyl" was made lowercase in the 2nd entry, "Bis (2-chloroethyl) ether-d_8".
Exhibit B: Form 7J	A capitalization change was made to the following entry: • The "B" was capitalized in the "Endrin % Breakdown (1)" field in the lower right-hand corner of the form. • A space was removed between all three references to "% Breakdown" to reflect "%Breakdown".
Exhibit B: Form 7L	In the "EPA Sample No. (INDC3##)" field, the phrase "INDCM##" was replaced with "INDC3##".
Exhibit B: Form 7N	The name of the form was changed from "Form VII ARO-1" to "Form VII ARO".

EXHIBIT/SECTION(S)	REVISIONS
Exhibit B: Form 8A	• The "EPA Sample No.(VSTD050##):" field has been changed to "EPA Sample No.(VSTD#####):" • The Area Upper Limit was changed from "+ 100%" to "200%" for Low/Medium Volatiles and from "+140%" to "140%" for Trace Volatiles. • The Area Lower Limit was changed from "- 50%" to "50%" for Low/Medium Volatiles and from "-60%" to "60%" for Trace Volatiles.
Exhibit B: Forms 8A, 8B, 8C, 8D, 8E, 8F, 8G, 8H, 8J, 9A, 9B	The footnote denoted with an asterisk was removed from all forms.
Exhibit B: Form 8B	• The Area Upper Limit was changed from "+100%" to "140%". • The Area Lower Limit was changed from "-50%" to "60%". • The RT Upper Limit was changed from "+0.50" to "+0.33". • The RT Lower Limit was changed from "-0.50" to "-0.33".
Exhibit B: Forms 8C, 8D, 8E, 8F	• The Area Upper Limit was changed from "+ 100% of internal standard area" to "200% of internal standard area". • The Area Lower Limit was changed from "- 50% of internal standard area" to "50% of internal standard area".
Exhibit B: Forms 8D, 8E, 8F	One space was removed after the "#" symbol at the top of each column in the table.
Exhibit B: Form 8G	A section of line was removed from the end of the line for "DCB" in the "Mean Surrogate RT From Initial Calibration" box at the top of the page.
Exhibit B: Form 7J, 7K, 7L, 9A	References to "Tetrachloro-m-xylene" and "Decachlorobiphenyl" were changed to "TCX" and "DCB". Text was added to the bottom of the page to reflect this change.
Exhibit B: Form 10A	The row heights were adjusted for space and clarity.
Exhibit B: Form 10B	The row heights were adjusted for space and clarity.
Exhibit B: Form DC-2	Spacing was adjusted to the top of page 1 of Form DC-2 to legibly display text.
EXHIBIT C	
Exhibit C: Title Page	The term "CRQL" was changed to "Contract Required Quantitation Limits (CRQL)"

EXHIBIT/SECTION(S)	REVISIONS
Exhibit C: Section 1.0	The following changes were made to Section 1.0, Organic Target Analyte List and Contract Required Quantitation Limits: In number 10, "Carbon Disulfide", the "D" in disulfide was changed to lower case. In number 42, "m, p xylene", one space before "p" was removed.
Exhibit C: Section 2.0	• On the 3rd and 5th pages of the semivolatiles section of the table, the word "Low" was added before "Water" in the 4th column from the left. • The hyphen was removed from entry 55, "Bis (2-chlorethyl) ether". • The hyphen was removed from entry 116, "Indeno(1,2,3-cd)pyrene". • The hyphen was removed from entry 117, "Dibenzo(a,h)anthracene". • In Footnote 2, the "B" in "Bis" is capitalized, and the "c" in "chloroisopropyl is lowercase. The compound is now listed as "Bis (2-chloroisopropyl) ether".
EXHIBIT D TRACE VOA	
Exhibit D/Trace VOA: Section 2.2	In the 4th sentence, the word "spectra" was changed to "spectral".
Exhibit D/Trace VOA: Section 6.5.6	The phrase "non-ketone" was added before "target compounds" in the 1st sentence.
Exhibit D/Trace VOA: Section 7.2.2.4	For the 3rd compound in the list under Compounds, the "c" in "chloride was made lowercase for "Vinyl chloride-d_3".
Exhibit D/Trace VOA: Section 9.3.4	• All occurrences of "m- and p-xylene" were changed to "m,p-xylene". • The word "respectively" was added at the end of the section, following "isomers".
Exhibit D/Trace VOA: Section 9.3.5.5	The section was modified to read as follows: "Up to two target compounds and DMCs (excluding those with minimum RRF requirements of 0.010) may fail to meet the criteria listed in Section 9.3.5.3 but these compounds must still meet the minimum RRF requirements of 0.010. Up to two target compounds and DMCs (excluding those with maximum %RSD requirements of 40.0%) may fail to meet the criteria listed in Section 9.3.5.4 but these compounds must still meet the maximum %RSD requirements of 40.0%. The exceptions are 1,4-dioxane and 1,4-dioxane-d_8, which must have a minimum RRF greater than or equal to 0.0050 and the %RSD must be less than or equal to 50.0%."
Exhibit D/Trace VOA: Section 9.3.5.6	• A "%" sign was added following "50" at the end of the 1st sentence. • The following sentence was added at the end of the section: "The exceptions are 1,4-dioxane and 1,4-dioxane-d_8, which must meet a minimum RRF of 0.0050."

EXHIBIT/SECTION(S)	REVISIONS
Exhibit D/Trace VOA: Section 9.4.1	• The phrase "and its associated DMC" was added following "1,4-Dioxane" in the 1st sentence. • The word "target" was added before "compounds". • The phrase "and associated DMCs" was added at the end of the 1st sentence.
Exhibit D/Trace VOA: Section 9.4.5.1	The compound name "1,4-dioxane-d_8" was added following the phrase "and the DMC" in the 1st sentence.
Exhibit D/Trace VOA: Section 9.4.5.2	The compound name "1,4-dioxane-d_8" was added after the phrase "and its associated DMC" in the 2nd sentence.
Exhibit D/Trace VOA: Section 9.4.5.3	The reference to "Table 4" in the 1st sentence was corrected to read "Table 2".
Exhibit D/Trace VOA: Section 9.4.5.4	The section was modified to read as follows: "For an opening CCV, up to two target compounds and DMCs (excluding those compounds with minimum RRF requirements of 0.010) may fail to meet the criteria listed in Section 9.4.5.2 but these compounds must still meet the minimum RRF requirements of 0.010. Up to two target compounds and DMCs (excluding those compounds with maximum Percent Difference requirements of ±40.0%) may fail to meet the requirements listed in Section 9.4.5.3 but these compounds must still meet the maximum Percent Difference requirements of ±40.0%. The exceptions are 1,4-dioxane and 1,4-dioxane-d_8, which must have a minimum RRF greater than or equal to 0.0050 and the Percent Difference must be within the inclusive range of ±50.0%. For a closing CCV, all target compounds and DMCs must meet the requirements listed in Sections 9.4.5.2 and 9.4.5.3."
Exhibit D/Trace VOA: Section 9.4.5.5	A new section was added and appears as follows: "For analysis using the SIM technique, all target compounds and DMCs must meet a minimum RRF criterion of 0.010 and have a maximum Percent Different of ±50%. The exceptions are 1,4-dioxane and 1,4-dioxane-d_8 which must meet a minimum RRF of 0.0050."
Exhibit D/Trace VOA: Section 10.2.1	The following sentence was added at the end of this section: "The pH determination procedure listed in Section 10.2.3 must still be performed manually."
Exhibit D/Trace VOA: Section 10.2.3	The following language was removed from the beginning of the section, and placed at the end of the section: "Once the sample aliquots have been taken from the VOA vial, the pH of the water sample must be determined. The purpose of the pH determination is to ensure that all VOA samples were acidified in the field. Test the pH by placing one or two drops of sample on the pH paper (do not add pH paper to the vial). Record the pH of each sample and report these data in the SDG Narrative, following the instructions in Exhibit B. No pH adjustment is to be performed by the Contractor."

EXHIBIT/SECTION(S)	REVISIONS
Exhibit D/Trace VOA: Section 10.2.10.2	The word "initial" was eliminated from before the phrase "calibration range" at the end of the sentence.
Exhibit D/Trace VOA: Section 11.1.4.3	The word "adjusted" was added before the phrase "Contract Required Quantitation Limit" in the 3rd sentence of the section.
Exhibit D/Trace VOA: Section 11.2.3	The phrase "(straight-chain or branched) or C_nH_{2n} (cyclic)" was added after the formula "C_nH_{2n+2}" in the 3rd sentence of the section.
Exhibit D/Trace VOA: Section 11.3.1.2	• The reference to "m- and p- xylene" in the 1st sentence was changed to "m,p-xylene". • In the Note,"ortho-xylene" was replaced with "o-xylene", and "meta/para xylene" was replaced with "m,p-xylene".
Exhibit D/Trace VOA: Section 11.3.4.2	Equation 8 below was modified to include the new DF variable: $$\%R = \frac{Q_d \times DF}{Q_a} \times 100$$
Exhibit D/Trace VOA Section 11.4.4	The following sentence was added at the end of the section: "For SIM analysis, all DMCs must meet the recovery limits listed in Table 5."
Exhibit D/Trace VOA: Section 11.4.5	The following sentence was removed from the end of the section: "For SIM analysis, all DMCs must meet the recovery limits listed in Table 5."
Exhibit D/Trace VOA: Section 11.5.6	The word "adjusted" was added before "CRQL" in the 5th sentence of the section.
Exhibit D/Trace VOA: Section 12.1.1.3	The word "initial" was removed before "calibration range" in the 2nd sentence of the section.
Exhibit D/Trace VOA: Table 1	The language "base peak, 100% relative abundance" has been capitalized to read "base peak, 100% Relative Abundance".
Exhibit D/Trace VOA: Table 2	The reference to "m- and p-xylenes" was changed to "m,p-Xylene".
Exhibit D/Trace VOA: Table 3	• The reference to "m- and p-xylenes" was changed to "m,p-Xylene". • The reference to "o-xylene" was changed to "o-Xylene"
Exhibit D/Trace VOA: Table 4	The reference to "m- and p-xylenes" were changed to "m,p-Xylene".
Exhibit D/Trace VOA: Table 7	• The "D" in "disulfide" was made lowercase for the compound "Carbon disulfide", the 5th entry under "Chloroethane-d_5 (DMC)". • The hyphen between "Methyl" and "tert" was removed in "Methyl tert-butyl ether", the 6th entry under "1,2-Dichloroethane-d_4 (DMC)".

EXHIBIT/SECTION(S)	REVISIONS
Exhibit D/Trace VOA: Table 8	The word "1,1,2,2-Tetrochloroethane-d_2" was changed to "1,1,2,2-Tetrachloroethane-d_2".
EXHIBIT D LOW/MEDIUM VOLATILES	
Exhibit D/Low-Med VOA: Section 6.7.6	The phrase "(for non-ketone compounds)" was added following the phrase "25 ng or less" in the 1st sentence of the section.
Exhibit D/Low-Med VOA: Section 7.2.2.3	In the 3rd sentence, the word "weekly" was changed to "monthly".
Exhibit D/Low-Med VOA: Section 8.1.1.4	The word "sodium" was added before "bisulfate" in the 3rd sentence.
Exhibit D/Low-Med VOA: Section 9.1.1.1	The word "(suggested)" was removed from the 1st sentence under "Purge Temperature".
Exhibit D/Low-Med VOA: Section 9.3.4.2	• References to "m- and p-xylenes" were changed to "m,p-xylene" in sentences 2, 3, and 4. • The word "respectively" was added at the end of the section.
Exhibit D/Low-Med VOA: Section 9.3.5.4	The section was modified to read as follows: "Up to two target compounds and DMCs (excluding those with minimum RRF requirements of 0.010) may fail to meet the criteria listed in Section 9.3.5.2 but these compounds must still meet the minimum RRF requirements of 0.010. Up to two target compounds and DMCs (excluding those with maximum %RSD requirements of 40.0%) may fail to meet the criteria listed in Section 9.3.5.3 but these compounds must still meet the maximum %RSD requirements of 40.0%. The exceptions are 1,4-dioxane and 1,4-dioxane-d_8, which must have a minimum RRF greater than or equal to 0.0050 and the %RSD must be less than or equal to 50.0%."
Exhibit D/Low-Med VOA: Section 9.4.5.2	The compound "1,4-dioxane-d_8" was added in the 2nd sentence after the phrase "its associated DMC".
Exhibit D/Low-Med VOA: Section 9.4.5.3	The number "±50%" was added to replace "50%" at the end of the section.

EXHIBIT/SECTION(S)	REVISIONS
Exhibit D/Low-Med VOA: Section 9.4.5.4	The section was modified to read as follows: "For an opening CCV, up to two target compounds and DMCs (excluding those compounds with minimum RRF requirements of 0.010) may fail the criteria listed in Section 9.4.5.2 but these compounds must still meet the minimum RRF requirements of 0.010. Up to two target compounds and DMCs (excluding those compounds with maximum Percent Difference requirements of ±40.0%) may fail to meet the requirements listed in Section 9.4.5.3 but these compounds must still meet the maximum Percent Difference requirements of ±40.0%. The exceptions are 1,4-dioxane and 1,4-dioxane-d_8, which must have a minimum RRF greater than or equal to 0.0050 and the Percent Difference must be within the inclusive range of ±50.0%. For a closing CCV, all target compounds and DMCs must meet the requirements listed in Sections 9.4.5.2 and 9.4.5.3."
Exhibit D/Low-Med VOA: Section 10.1.3.6	The 3rd paragraph of this section was modified to read as follows: "Some of this instrumentation may be set-up by the manufacturer to add only 1 µL of internal standard or DMCs. The 1 µL addition of standards will be allowed if the addition is done solely in an automated manner, and if the final concentration of the following standards in the 5 mL water sample can be met: 50 µg/L for internal standards; the concentrations listed in Section 7.2.2.6.2 for DMCs in the initial calibration; and the concentrations listed in Section 7.2.2.6.4 for DMCs in the CCV."
Exhibit D/Low-Med VOA: Section 10.1.5.6	The number "4.9" replaced the number "5" in the 1st sentence.
Exhibit D/Low-Med VOA: Section 10.1.6.4	The word "initial" was removed from in front of "calibration range" in the 1st sentence.
Exhibit D/Low-Med VOA: Section 11.1.1.4	The word "adjusted" was added before "Contract Required Quantitation Limit" in the 4th sentence of the 3rd bullet in this section.
Exhibit D/Low-Med VOA: Section 11.1.2.3	The phrase "(straight-chain or branched) or C_nH_{2n} (cyclic)" was added after the formula "C_nH_{2n+2}" in the 3rd sentence of the section.
Exhibit D/Low-Med VOA: Section 11.2.1.5	• The reference to "m- and p-xylenes" in the 1st sentence was changed to "m,p-xylenes". • The reference to meta/para xylene" was changed to "m,p-xylene" in the Note.
Exhibit D/Low-Med VOA: Section 11.2.4.2	Equation 13 below was modified to include the new DF variable: $$\%R = \frac{Q_d \times DF}{Q_a} \times 100$$

EXHIBIT/SECTION(S)	REVISIONS
Exhibit D/Low-Med VOA: Sections 11.3.8	The word "adjusted" was added before "CRQL" in the 2nd sentence.
Exhibit D/Low-Med VOA: Section 11.4.5	The phrase "the adjusted" was added before "CRQL" in the 5th sentence.
Exhibit D/Low-Med VOA: Section 12.1.1.3	The word "initial" was removed from before "calibration range" in the 2nd sentence.
Exhibit D/Low-Med VOA: Section 12.1.2.4	The word "initial" was removed from before "calibration range" in the 2nd sentence.
Exhibit D/Low-Med VOA: Section 12.1.5.2	The phrase "the adjusted" was added before "CRQL" in the 3rd sentence.
Exhibit D/Low-Med VOA: Table 2	The reference to "m- and p-xylenes" was changed to "m,p-xylene".
Exhibit D/Low-Med VOA: Table 3	The reference to "m- and p-xylenes" was changed to "m,p-Xylene".
Exhibit D/Low-Med VOA: Table 4	• The reference "m- and p-xylenes" was changed to "m,p-Xylene". • Footnote 1 was added to "RRF" on the 3rd page of Table 4.
Exhibit D/Low-Med VOA: Table 7	• For the entry "Carbon disulfide", the "d" in "disulfide" was changed to lowercase. • For the entry "Vinyl chloride-d_3 (DMC)", the "c" in "chloride" was changed to lowercase. • The hyphen between "Methyl" and "tert" was removed in "Methyl tert-butyl ether", the 6th entry under "1,2-Dichloroethane-d_4 (DMC)".
EXHIBIT D SVOA	
Exhibit D/SVOA: Section 1.2	The word "should" was changed to "must" in the 5th sentence of the section.
Exhibit D/SVOA: Section 2.4	The word "spectra" in the 3rd sentence was changed to "spectral".
Exhibit D/SVOA: Section 6.5	The symbol for "1/2" was replaced with the numerical "1/2".
Exhibit D/SVOA: Section 6.21.2	The term "micron" was replaced with the abbreviation "µm" twice in the 4th sentence.

EXHIBIT/SECTION(S)	REVISIONS
Exhibit D/SVOA: Section 7.2.3.1.1	The hyphen has been removed between "Bis" and "(2-chloroethyl)".
Exhibit D/SVOA: Section 7.2.3.5.1	In the 4th paragraph, the 3rd sentence was modified to read as follows: "Seven target compounds and two DMCs (2,4-Dinitrophenol, Pentachlorophenol, 2-Nitroaniline, 3-Nitroaniline, 4-Nitroaniline, 4-Nitrophenol, 4,6-Dinitro-2-methylphenol, 4-Nitrophenol-d_4, and 4,6-Dinitro-2-methylphenol-d_2) will require only a four-point initial calibration at 10, 20, 40, and 80 ng/µL since detection at less than 10 ng/µL is difficult."
Exhibit D/SVOA: Section 7.2.3.6.1	The phrase "sample extract" was changed to "sample extracts" in the 3rd sentence.
Exhibit D/SVOA: Section 7.2.3.6.2	The phrase "sample extract" was changed to "sample extracts" in the 1st sentence.
Exhibit D/SVOA: Section 9.3.5.4	This section was modified to read as follows: "Up to four target compounds and DMCs (excluding those with minimum RRF requirements of 0.010) may fail to meet the criteria listed in Section 9.3.5.2 but these compounds must still meet the minimum RRF requirements of 0.010. Up to four target compounds and DMCs (excluding those with maximum %RSD requirements of 40.0%) may fail to meet the criteria listed in Section 9.3.5.3 but these compounds must still meet the maximum %RSD requirements of 40.0%."
Exhibit D/SVOA: Section 9.3.5.5	This section was modified to read as follows: "For the optional analysis of PAHs/pentachlorophenol using the SIM technique, two target compounds and DMCs (excluding those with minimum RRF requirements of 0.010) may fail to meet the criteria listed in Section 9.3.5.2 but these compounds must still meet the minimum RRF requirements of 0.010. Up to two target compounds and DMCs (excluding those with maximum %RSD requirements of 40.0%) may fail to meet the requirements criteria listed in Section 9.3.5.3 but these compounds must still meet the maximum %RSD requirements of 40.0%."
Exhibit D/SVOA: Section 9.4.5.3	The phrase "and DMC" was added in the 1st and 2nd sentences after the phrase "target compounds".
Exhibit D/SVOA: Section 9.4.5.4	This section was modified to read as follows: "For an opening CCV, up to four target compounds and DMCs (excluding those compounds with minimum RRF requirements of 0.010) may fail to meet the criteria listed in Section 9.4.5.2 but these compounds must still meet the minimum RRF requirements of 0.010. Up to four target compounds and DMCs (excluding those with maximum Percent Difference requirements of ±40.0%) may fail to meet the requirements listed in Section 9.4.5.3 but these compounds must still meet the maximum Percent Difference requirements of ±40.0%. For a closing CCV, all target compounds and DMCs must meet the requirements listed in Sections 9.4.5.2 and 9.4.5.3."

EXHIBIT/SECTION(S)	REVISIONS
Exhibit D/SVOA: Section 9.4.5.5	This section was modified to read as follows: "For the optional analysis of PAHs/pentachlorophenol using the SIM technique, up to two target compounds and DMCs (excluding those with minimum RRF requirements of 0.010) may fail to meet the criteria listed in Section 9.4.5.2 but these compounds must still meet the minimum RRF requirements of 0.010. Up to two target compounds and DMCs (excluding those with maximum Percent Difference requirements of ±40.0%) may fail to meet the criteria listed in Section 9.4.5.3 but these compounds must still meet the maximum Percent Difference requirements of ±40.0%. All PAH and phenolic compounds must meet the criteria listed in Sections 9.4.5.2 and 9.4.5.3 for a closing CCV."
Exhibit D/SVOA: Section 10.3.3.3.1	The 3rd sentence has been modified to eliminate spacing between "bis" and "(2-ethylhexyl)" and "phthalate".
Exhibit D/SVOA: Section 11.1.2.3	The phrase "(straight-chain or branched) or C_nH_{2n} (cyclic)" was added after the formula "C_nH_{2n+2}" in the 3rd sentence.
Exhibit D/SVOA: Section 11.1.2.4	The letter "a" was removed from in front of the phrase "aldol-condensation reaction" in the 1st sentence.
Exhibit D/SVOA: Section 11.4.4.2.1	The letter "a" was replaced by "the original" in the 1st sentence.
Exhibit D/SVOA: Sections 12.2.2.1	The following sentence was moved from the beginning of Section 12.2.3.4 to the end of Section 12.2.2.1: "For the optional analysis by the SIM method, MS/MSD will not be required unless specifically requested by the Region."
Exhibit D/SVOA: Section 12.2.4	The following Note was added at the end of the section: "NOTE: In cases where SIM MS/MSD is requested, if the sample designated for SIM MS/MSD analysis has <u>all</u> SIM target compounds detected during the full scan analysis, then the laboratory must contact SMO to determine if another sample should be chosen for SIM MS/MSD analysis. In this case, both sets of SIM MS/MSD analyses will be billable. If the Region does not request another sample for SIM MS/MSD, the original SIM MS/MSD analysis is still billable."
Exhibit D/SVOA: Section 12.2.7	• Section 12.2.6.5 is removed as a reference. • A typo in "12.2.6.2" was fixed. It previously read "12,2.6.2".
Exhibit D/SVOA: Table 1	The phrases "Greater than" and "but less than or equal to" and a "%" symbol were removed from the entry for mass 442.
Exhibit D/SVOA: Table 2	• The space was removed from between "(2-chloroethyl)" and "ether-d_8" in Bis(2-chloroethyl)ether-d_8. • The italics were removed from the letter "N" in "N-Nitrosodiphenylamine".

EXHIBIT/SECTION(S)	REVISIONS
Exhibit D/SVOA: Table 3	• The hyphen was removed from between "Bis" and "(2-chloroethyl) ether". • The hyphen was removed from between "Bis" and "(2-chloroethoxy) methane". • The hyphen was removed from between "Bis" and "(2-ethylhexyl) phthalate". • The hyphen was removed from between "Bis" and "(2-chloroethyl) ether-d_8".
Exhibit D/SVOA: Table 4	• A Footnote was added for the column with "RRF" at the top. It states "For a closing CCV, all target compounds and DMCs must meet a minimum RRF of 0.010 and a maximum %Difference of ±50.0." • The Footnote was removed from the column for "%RSD". • The hyphen was removed from between "(2-chloroethyl)" and "ether" in Bis(2-chloroethyl)ether. • The hyphen was removed from between "Bis" and "(2-chloroethoxy)" in Bis (2-chloroethoxy)methane. • The hyphen was removed from between "Bis" and "(2-ethylhexyl)" in Bis (2-ethylhexyl)phthalate. • The hyphen was removed from between "Bis" and "(2-chloroethyl)" in Bis(2-chloroethyl)ether-d_8. • In the explanation of Footnote 1, the space was removed from between the "%" symbol and the word "Difference".
Exhibit D/SVOA: Table 6	The hyphen was removed from between "Bis" and "(2-chloroethyl) ether-d_8".

EXHIBIT/SECTION(S)	REVISIONS
Exhibit D/SVOA: Table 7	• "(DMC)" was added in parentheses in the "2-Nitrophenol-d_4" column. • The "B" in "Bis" was made uppercase in "Bis(2-chloroethyl)ether-d_8". • The "B" in "Bis" was made uppercase and the "e" in "(2-Ethylhexyl)" was made lowercase in "Bis(2-ethylhexyl)phthalate". • The "B" in "Bis" was made uppercase and the "c" was made lowercase in "chloroethyl" in Bis (2-chloroethyl) ether. The space was removed from between "(2-chloroethyl)" and "ether". • The "O" was uppercase and "c" was made lowercase in "Oxybis" in "2,2'-Oxybis(1-chloropropane)". • The "B" in "Bis" was made uppercase, the "c" was made lowercase in "chloroethoxy" lowercase, and the space was removed from between "(chloroethoxy)" and "methane" in "Bis(2-chloroethoxy)methane". • The letters "(DMC)" were added in parentheses in the "4-Nitrophenol-d_4" column. • The spaces were removed between "Benzo" and "(a)" and "(a)" and "pyrene-d_{12}".
EXHIBIT D PESTICIDES	
Exhibit D/PEST: Section 6.26.1.3.1	In the 3rd bullet, the word "maximum" was removed from in front of the phrase "low-point concentration level" in the 1st sentence.
Exhibit D/PEST: Section 6.26.1.4	This section was modified to read as follows: "Columns are mounted in a press-fit Y-shaped glass 3-way union splitter or a Y-shaped fused-silica connector from a variety of commercial sources. The two columns may be mounted in an 8 inch deactivated glass injection tee. The Contractor should follow the manufacturer's recommendations for mounting 0.53 mm capillary columns in injector ports."
Exhibit D/PEST: Section 7.1.6	"Tetrabutylammonium Sulfite" has been modified to reflect "Tetrabutylammonium sulfite".
Exhibit D/PEST: Section 7.1.7	"Sodium Sulfite" has been modified to reflect "Sodium sulfite".

EXHIBIT/SECTION(S)	REVISIONS
Exhibit D/PEST: Section 7.2.2.5	The first six sentences of the paragraph have been modified to read as follows: "The suggested compositions of Individual Standard Mixture A and Mixture B are listed in this section with the concentrations of each target compound and surrogate given for the CS1 Standard A and CS1 Standard B. The CS1 Standard C for Individual Standard Mixture C will contain all target compounds and surrogates for both Mixture A and Mixture B at the same concentrations as the CS1 Standard for Mixture A and Mixture B. The Calibration Standard Mixture solutions must be prepared in either hexane or iso-octane. The analysis of the Resolution Check Mixture will determine whether one or two sets of Individual Standard Mixture solutions will be needed. Prepare calibration standards at a minimum of five concentration levels. The concentrations of the pesticides in the low-point standard mixtures (CS1) correspond to the low-point concentration (see Table in this section) or lower for each analyte."
Exhibit D/PEST: Section 7.2.2.8.1	The space was removed from between "(2-ethylhexyl)" and "phthalate" in "Bis (2-ethylhexyl) phthalate".
Exhibit D/PEST: Section 9.2.4.7	The term "CF" was replaced by "CFs" in the 2nd sentence.
Exhibit D/PEST: Section 9.2.5.2	The phrase "for both GC columns" was added at the end of the section.
Exhibit D/PEST: Section 9.2.5.7	• The phrase "maximum %RSD of" was placed before "20.0%" in the 3rd sentence. • The phrases "limit for %RSD" was removed from after "20.0%" in the 3rd sentence.
Exhibit D/PEST: Section 9.2.5.8	The letter "(C)" was added after the phrase "Individual Standard Mixture" in the 1st sentence of this section.
Exhibit D/PEST: Section 10.3.1.4.3.4	The following sentence was added at the end of this section: "Calculate the Percent Recovery of each single component analyte using Equation 13 in Section 10.3.2.2.3."
Exhibit D/PEST: Section 10.3.2.2.3	The following Note was added below Equation 13: "NOTE: For Florisil Cartridge Performance Check, use DF = 1.0 in calculations."
Exhibit D/PEST: Section 10.4.3.3	The word "both" in the 1st sentence was bolded.
Exhibit D/PEST: Section 10.4.3.11	The phrase "(for the lower of the two column responses)" was added in the 1st sentence after the phrase "analyte peak".
Exhibit D/PEST: Section 10.4.3.12	This section was removed in its entirety. The following text was removed: "The DF chosen should keep the response of the largest peak for a target compound in the upper half of the initial calibration range of the instrument."

EXHIBIT/SECTION(S)	REVISIONS
Exhibit D/PEST: Section 11.1.2.3.2	The number "43000" was changed to "42000" in front of the phrase "µg/kg for Toxaphene".
Exhibit D/PEST: Section 11.1.2.4	The number "125.0" in the 2nd sentence was changed to "125".
Exhibit D/PEST: Section 11.2.1.6.1.1	In the last paragraph, the 1st sentence was changed to read as follows: "The CFs used in Equations 14-17 are those from the most recent initial calibration."
Exhibit D/PEST: Section 11.2.1.6.1.2	A hyphen has been added to "On-Column" in both the equation and title.
Exhibit D/PEST: Section 11.2.1.6.2.2	A hyphen has been added to "On-Column" in both the equation and title.
Exhibit D/PEST: Section 12.2.5.4	• The word "and" was removed from after "Section 11.3.5". • A comma replaced the hyphen after "11.3.7". • The word "and" was placed in front of "11.3.9".
EXHIBIT D AROCLORS	
Exhibit D/ARO: Section 6.2.5	The symbol for "1/2" was replaced with the numerical "1/2".
Exhibit D/ARO: Section 7.2.3.1	The units "ng/L" in the 2nd sentence after the numbers "0.20" and "0.40" were changed to "µg/mL".
Exhibit D/ARO: Section 7.2.3.4.4	• All instances of "volume extract" are rephrased as "extract volume". • All instances of "final volume" were reworded as "final extract volume". • The reference to "Sections 7.2.3.4.1 - 7.2.3.4.4" in the 1st sentence was changed to "Sections 7.2.3.4.1 - 7.2.3.4.3". • The words "volume extracts" in the 1st and 2nd sentences were changed to "extract volume". • In the 3rd sentence, the word "volume" was inserted between "extract" and "levels". • In the 6th sentence, the word "extract" was inserted between "final" and "volumes". • In the 1st bullet, the word "extract" was added to the 1st and 2nd sentences before the word "volume".
Exhibit D/ARO: Section 7.2.3.5.1	This section title was deleted, and all of the content moved to Section 7.2.3.5.
Exhibit D/ARO: Section 9.2.3.5	Next to entries 1-7 under "Initial Calibration Sequence", "(400 ng/mL)" was added.

EXHIBIT/SECTION(S)	REVISIONS
Exhibit D/ARO: Section 9.2.4.2	The phrase "calibrations" in the 4th sentence of the first paragraph was reworded as "calibration standards". Equation 1 has been modified as follows: $$\overline{RT} = \frac{\sum_{i=1}^{n} RT_i}{n}$$
Exhibit D/ARO: Section 9.2.4.3	The Compound list has been modified to capitalize the "t" in "Tetrachloro-m-xylene" and "d" in "Decachlorobiphenyl".
Exhibit D/ARO: Section 9.2.5	The phrase "both GC columns" in the 1st sentence was replaced by the phrase "each GC column".
Exhibit D/ARO: Section 9.2.5.1	The reference to "Section 7.2.3.4" in the 1st sentence was changed to "Section 7.2.3.5".
Exhibit D/ARO: Section 9.3.4	• The following new content was added within Section 9.3.4: For each analysis of the CS3 Individual Standard Mixture(s) used to demonstrate calibration verification, calculate the Percent Difference between the CF of each Aroclor peak (including the surrogates) in the standard mixture and the $\overline{CF}$ from the initial calibration, using Equation 5. $$\%Difference = \frac{CF - \overline{CF}}{\overline{CF}} \times 100$$ EQ. 5 Percent Difference Between the Calibration Factor and the Mean Calibration Factor Where, %Difference =Percent Difference. CF = Calibration Factor for CS3 Standard used for Calibration Verification. $\overline{CF}$ = Mean Calibration Factor. • Subsequent section, subsections, and equation numbers were renumbered to account for this addition.
Exhibit D/ARO: Section 9.3.5	The word "chromatogram" was added to the 1st sentence.

EXHIBIT/SECTION(S)	REVISIONS
Exhibit D/ARO: Section 9.3.5.3 (formerly Section 9.3.4.3)	This section was modified to read as follows: "For the opening CCV, Percent Difference for each Aroclor peak and surrogates calculated from the CCV standard must not exceed ±15%. For the closing CCV, Percent Difference for each Aroclor peak and surrogates calculated from the CCV must not exceed ±50%. If the Percent Difference for the closing CCV is ±15% or less, then it can be used for the opening CCV of the next 12-hour period."
Exhibit D/ARO: Section 10.2.1.5.2	Language stating that GPC cleanup may be performed "if required" was removed.
Exhibit D/ARO: Section 10.3.3.8	The phrase "(for the lower of the two column responses)" was added to the 1st sentence after the phrase "largest analyte peak".
Exhibit D/ARO: Section 10.4.3.12	This section, stating that the DF chosen should keep the response if the largest peak for a target compound in the upper half of the initial calibration range of the instrument, was removed in its entirety.
Exhibit D/ARO: Section 11.2.1.1.1	In the text box, under the entry for GPC, the number is changed from "1" to "1.0".
Exhibit D/ARO: Section 11.2.1.1.2	A hyphen has been added to "On-Column" in the equation.
Exhibit D/ARO: Section 11.2.1.2.2	A hyphen has been added to "On-Column" in the equation.
Exhibit D/ARO: Table 3	• "tetrachloro(m)xylene" has been modified to indicate "Tetrachloro-m-xylene" once in the table, • "tetrachloro(m)xylene" has been modified to indicate "tetrachloro-m-xylene" twice in the Note below the table.
EXHIBIT E	
Exhibit E Section 4.3	The phrase "Exhibit D" was added at the end of the section after "Exhibit C".
EXHIBIT F	
Exhibit F: Section 1.1	The phrase "US Environmental Protection Agency (USEPA)" was added to the 3rd sentence.
Exhibit F: Section 2.5.6	The year in the date was changed from "2000" to "2005".
Exhibit F: Section 3.5.2.2	The year in the date was changed from "2000" to "2005".

EXHIBIT/SECTION(S)	REVISIONS
EXHIBIT G	
Exhibit G	The following definitions were modified: Alkane - The phrase "(straight-chain or branched) or C_nH_{2n} (cyclic)" was added after the formula "C_nH_{2n+2}". Integration Scan Range - The phrase "Trace and Low/Medium" was added before the phrase "VOA and SVOA". Method Blank - The word "Trace" was added before "VOA", and the phrase "Low/Medium VOA" was added.
EXHIBIT H	
Exhibit H: Section 2.1.1	The word "Trace" was added before "volatiles" in the 1st sentence.
Exhibit H: Table 1, Volatiles and Trace Volatiles Data Element Instructions	The data element "IntermediateResultUnit" in the "Peak" node of Table 1 was changed to "IntermediateResultUnits".
Exhibit H: Table 2, Semivolatiles Data Element Instructions	Tune is no longer marked as applicable for "AnalyzedAmount" and "AnalyzedAmountUnits" in the "Analysis" node of Table 2.
Exhibit H: Table 3, Pesticide Data Element Instructions	• CCV was marked as applicable for "ResolutionUnits". • IPC is now marked as applicable for "PercentDifference", "PercentDifferenceLimitHigh", "PercentDifferenceLimitLow", and "PercentDifferenceLimitType" in the "Peak" node of Table 3. • The "Resolution" entry contains the following new instructions: "Report percent resolutions for midpoint INDA, INDB, or INDC initial calibration standards only; report resolutions for all PEMs used in the initial and calibration verification standards." • ICAL and ICV are marked as applicable for "Resolution", ResolutionLimitLow", "ResolutionLimitType", and "ResolutionUnits" in the "Peak" node of Table 4.